Remarks

Initially, it is noted that claims 3, 4 and 9-12 have been allowed. The Applicants would like to thank the Examiner for this indication of allowable subject matter.

Claims 1, 5 and 7 have been rejected under 35 U.S.C. §102(b) as being anticipated by Kasai (US 4,866,776). Claims 2, 6 and 8 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Kasai in view of Miles (US 5,610,986). Claims 13 and 15 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Kasai in view of Klayman (US 5,970,152). Claims 14 and 16 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Kasai in view of Miles and further in view of Klayman.

The above-mentioned rejections are respectfully traversed and submitted to be inapplicable to the claims for the following reasons.

Claim 1 is patentable over Kasai, since claim 1 recites a sound system for reproducing a plurality of channel signals including at least left and right front channels and a center channel for forward-placed speakers, the sound system having an attenuating means for attenuating either a left channel signal or a right channel signal according to an operation on an operating part; and a controlling means for controlling an attenuation of a center channel signal depending on the attenuation of the left channel signal or the right channel signal. Kasai fails to disclose or suggest the controlling means as recited in claim 1.

Kasai discloses a number of embodiments of a speaker system for a vehicle. The seventh embodiment, relied upon in the rejection of claim 1, includes left and right front speakers 2a and 2b, left and right rear speakers 4a and 4b, left and right front sub-speakers 22a and 22b, and left and right rear sub-speakers 23a and 23b. The system also includes a main amplifier 19 for powering the left and right front and rear speakers 2a, 2b, 4a and 4b, a signal comparator 25, a mixer 20 and a main amplifier with volume control 26 for powering the left and right front and rear sub-speakers 22a, 22b, 23a and 23b.

During operation of the system, when a difference between the levels of the left and right channel signals supplied to the main amplifier 19, the mixer 20 and the signal comparator 25 is within a predetermined threshold, the signal comparator 25 remains inactive. However, when the difference becomes greater than the predetermined threshold, the signal comparator 25 becomes active and controls the main amplifier with volume control 26 to reduce its gain and lower the level of the signal supplied to the left and right front and rear sub-speakers 22a, 22b, 23a and 23b. (See column 7, lines 31-57 and Figure 11).

In the rejection, the signal comparator 25 is relied upon as corresponding to the claimed controlling means, since the signal comparator 25 causes the main amplifier with volume control 26 to lower the level of the signal supplied to the left and right front and rear sub-speakers 22a, 22b, 23a and 23b. However, it is clear from the above description of the seventh embodiment of the speaker system of Kasai that the signal supplied to the left and right front and rear sub-speakers 22a, 22b, 23a and 23b is a combination of the left and right signals and is not a center channel signal as recited in claim 1. Therefore, it is apparent that the signal comparator 25 does not control the attenuation of a center channel signal. As a result, claim 1 is patentable over Kasai.

Claim 5 is patentable over Kasai, since claim 5 recites a sound system for reproducing a plurality of channel signals including at least left and right front channels for forward-placed speakers and left and right rear channels for rear-placed speakers, the sound system having an attenuating means for attenuating either front side channel signals or rear side channel signals according to an operation on an operating part; and an adding means for adding the attenuated side channel signals to the side channel signals not being attenuated. Kasai fails to disclose or suggest the adding means as recited in claim 5.

The first embodiment of Kasai, relied upon in the rejection of claim 5, includes the left and right front speakers 2a and 2b, the left and right rear speakers 4a and 4b, a front sub-speaker 8, and a rear sub-speaker 9. The system also includes a balance controller 106, a mixer 102 and a fader controller 104. The fader controller 104 is operable to change the gain of the left and right front speakers 2a and 2b and the front sub-speaker 8 with respect to the gain of the left and right rear speakers 4a and 4b and the rear sub-speaker 9. Further, the balance controller 106 is operable to change the gain of the left front speaker 2a and the left rear speaker 4a with respect to the gain of the right front speaker 2b and the right rear speaker 4b. (See column 2, line 53 – column 3, line 40 and Figure 1).

In the rejection, it is indicated that the fader controller 104 inherently includes the claimed adding means. However, the fader controller 104 only controls the gain of the front speakers with respect to the gain of the rear speakers. There is nothing in Kasai that suggests that the fader controller 104 adds the signals from front speakers to the signals of the rear speakers if the signals of the front speakers are attenuated, or vice-versa. As a result, claim 5 is patentable over Kasai. Further, if the Examiner maintains the position that the adding means is inherent in the fader controller 104, it is respectfully requested that the Examiner explain the basis for this conclusion.

Claim 7 is patentable over Kasai, since claim 7 recites a sound system for reproducing a plurality of channel signals including at least left and right front channels for forward-placed speakers and left and

right rear channels for rear-placed speakers, the sound system having an attenuating means for attenuating either left side channel signals or right side channel signals according to an operation on an operating part; and an adding means for adding at least a portion of the attenuated side channel signals to the side channel signals not being attenuated. Kasai fails to disclose or suggest the adding means recited in claim 7.

The first embodiment of the speaker system of Kasai, relied upon in the rejection of claim 5, is again relied upon in the rejection of claim 7. However, while Kasai discloses that the balance controller 106 controls the gain of the left front speaker 2a and the left rear speaker 4a with respect to the gain of the right front speaker 2b and the right rear speaker 4b, it is clear that there is no indication in Kasai that the balance controller 106 adds the signals from left speakers to the signals of the right speakers if the signals of the left speakers are attenuated, or vice-versa. As a result, claim 7 is patentable over Kasai. Further, as mentioned above, if the Examiner maintains the position that the adding means is inherent in the fader controller 104, it is respectfully requested that the Examiner explain the basis for this conclusion.

As for Miles and Klayman, these references are relied upon as disclosing a matrix factor of 0.45 to 0.7 and time delay device, respectively. However, it is apparent that neither of these references discloses or suggests the above-discussed features of claims 1, 5 and 7.

Because of the above-mentioned distinctions, it is believed clear that claims 1-16 are allowable over the references relied upon in the rejections. Furthermore, it is submitted that the distinctions are such that a person having ordinary skill in the art at the time of invention would not have been motivated to make any combination of the references of record in such a manner as to result in, or otherwise render obvious, the present invention as recited in claims 1-16. Therefore, it is submitted that claims 1-16 are clearly allowable over the prior art of record.

In view of the above amendments and remarks, it is submitted that the present application is now in condition for allowance. The Examiner is invited to contact the undersigned by telephone if it is felt that there are issues remaining which must be resolved before allowance of the application.

Respectfully submitted,

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